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1Gang-sized Multi-format video to Optical DVI converter,

MVDF

User's Manual

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Warnings and Cautions

Please read this manual and follow its instructions carefully.
The words **warning, caution,** and **note** carry special meanings and should be carefully reviewed:

Warning The personal safety of the patient may be involved. Disregarding this information could result in personal injury.

Caution Special service procedures or precautions must be followed to avoid damaging the device.

The warranty will be void if any of the following warnings or cautions are disregarded.

Warnings

To avoid a potential serious injury to the user and the patient and/or damage to this device, please note the following warnings:

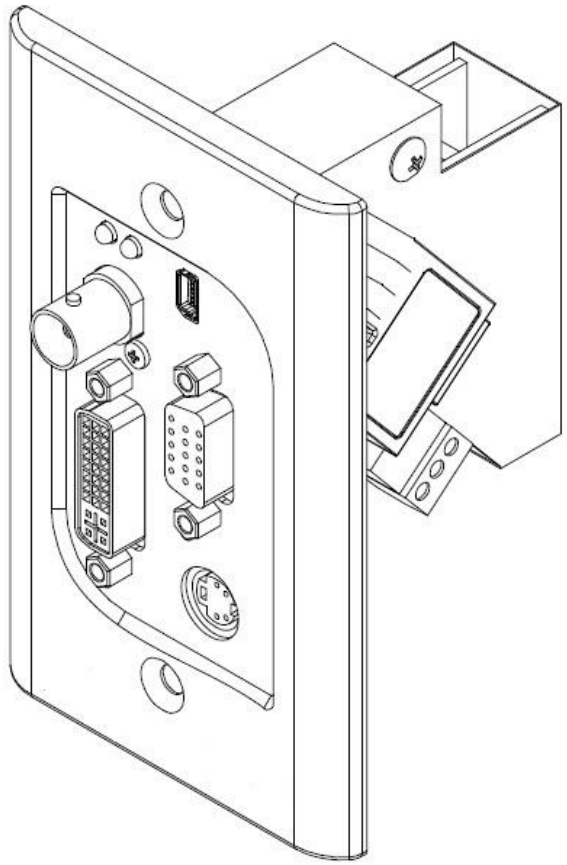
- Read this manual thoroughly and be familiar with its contents prior to using this device.
- Carefully unpack the device and check if any damage occurred during transport.
- This device is non-sterile and therefore should not be placed in the sterile field.
- Do not place the device or any other heavy object on the power connector. Damage to the connector can cause fire or electric shock.
- Do not place the device or any other heavy object on the power cord. Damage to the cable can cause fire or electric shock.
- This device should not be used adjacent to or stacked with other devices. If adjacent or stacked use is necessary, the device should be observed to verify normal operation in the configuration in which it will be used.
- Test this device prior to a surgical procedure. This device was fully tested at the factory before shipment.
- Do not attempt self repairs or adjustments not specifically detailed in this manual. Ensure that readjustments, modifications, and/or repairs are carried out by persons authorized by Opticis.
- Do not put any liquid or solid object into the device. If this occurs, unplug the device and have it checked by qualified personnel before operating it any further.
- Use appropriate caution to prevent contact with fluids if the device is being used with a power supply in patient environments.
- The use of cables and/or other accessories with this device, other than those specified, may result in increased emissions or decreased immunity of this device.

Cautions

- Connect the device to the AC adapter connected to a medical grade power cord ensuring the power cord is plugged into a grounded power outlet to achieve grounding reliability.
- Do not sterilize the device, as the delicate electronics cannot withstand this procedure.
- Use only the proprietary surgical display power supply for the display. Completely secure the connection between the DC power cord and the extension cord.
- Never operate the device immediately after transportation from a cold location to a warm location.
- To connect to an universal power supply, use an attachment plug appropriate for the power outlet, as outlined in the “Technical Specifications” section of this manual.
- Unplug the device if it is not to be used for an extended period of time. To disconnect the cord, unscrew the plug first, then pull the cord out by the plug. Never pull the cord itself.
- Allow adequate air circulation to prevent internal heat buildup. Do not place the device on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots. The device is cooled by natural convection and has no fan.
- Pay close attention to the cleaning instructions in this manual. A deviation may cause damage.
- Do not install the device near sunlight, excessive dust, mechanical vibration, or shock.
- Do not operate with the glass device screen facing downward.
- Handle the device with care.
- Changes or modifications not expressly approved by the party responsible for compliance could be void the user’s authority to operate the device.
- Place and fix device on the places where the easy plug and unplug of power supply can be done.
- To stop the operation of device immediately and safely, just unplug the power supply from the device.

About Your Device

This 1 Gang-sized Multi-format Wall Plate Converter, MVDF receives DVI, VGA, Composite and S-Video into optical DVI signal and transmits it up to 500m(OM2) (1,640ft) over one (1) multi-mode fiber (50um) without any data compression or latency. To recover electrical DVI signal, one (1) fiber DVI receiver, DVFX-100-RX should be used at the display end.



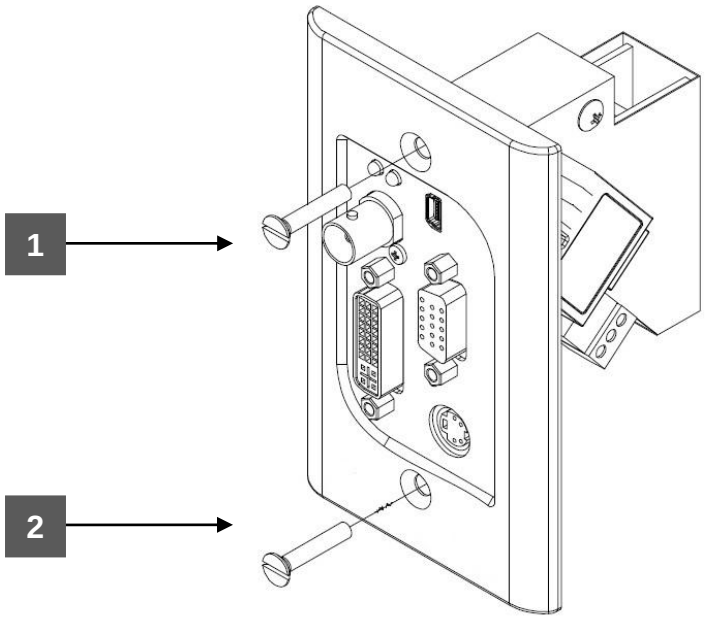
1 Gang-sized Multi-format video to Optical DVI Converter, MVDF

Intended Use

This video signal converter is equipment that converts DVI, VGA, Composite and S-Video signals which received from various medical devices into optical DVI to relay it to the other devices or displays.

Installation Guidance

This wall mounting type converter is installed in US standard gang (metal enclosure) preinstalled in boom equipment or wall. After insert this converter into the gang, tighten two screws to assemble with it as shown below.



Installation Condition

- Make sure this converter is required to install in cement wall or boom equipment with preinstalled US standard gang (metal enclosure) and internal combustion material preventing any damage or danger from internal fire.
- After installation and assembly, internal of this wall-mounting type converter cannot be touched or modified.

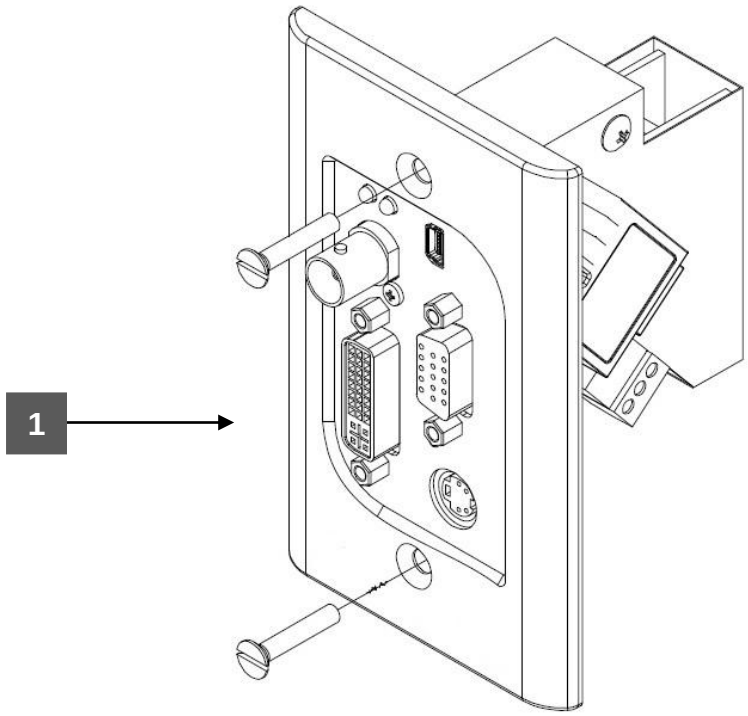
Indications

This device is indicated for general surgery for surgical procedures, for example Endoscopy etc.
This converter is non-sterile, reusable device not intended for use in the sterile field and intended for use by qualified physicians having complete knowledge of these surgical procedures.

Contraindications

There are no known contraindications for this device.

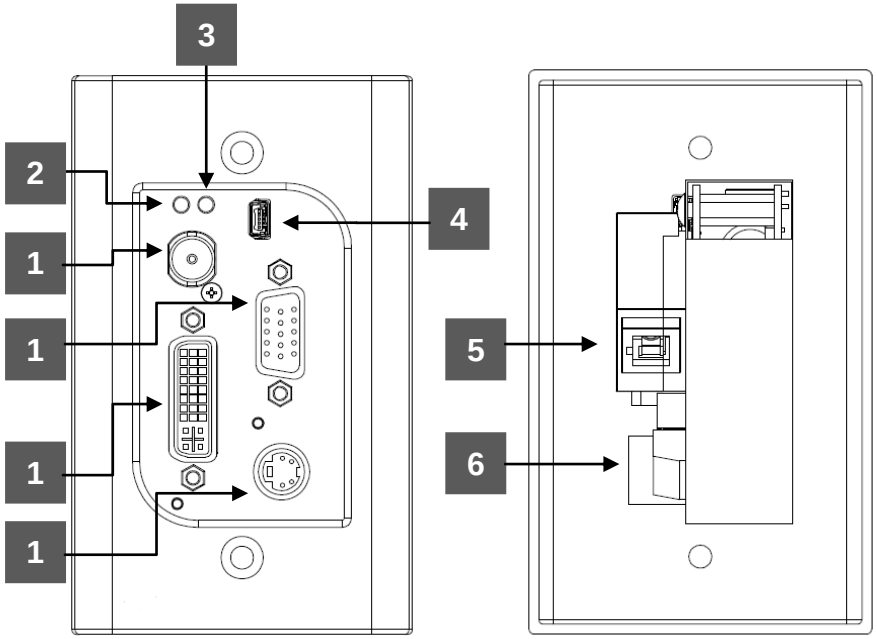
Package Content



Package Content	Part Number
1. Wall Plate for Near Source Converter Box (WPC)	MVDF

Device Features

A list of the MVDF parts and their functions is provided below.



Front panel

1. 4 input signal ports
- DVI, VGA, Composite and S-Video input ports with mechanical locking structure

2. Video Input Status LED
- Indicates current input status. Shines Yellow if the input signal is connected; Yellow is turned off if the input signal is disconnected.

3. Power LED
- Indicates current status. Shines green if the converter is powered on; Green is turned off if the power is disconnected.

4. Mini USB Port
- To maximize compatibility with various input sources having customized or unique output resolutions, easy firmware update can be done via front mini USB port.

Back panel

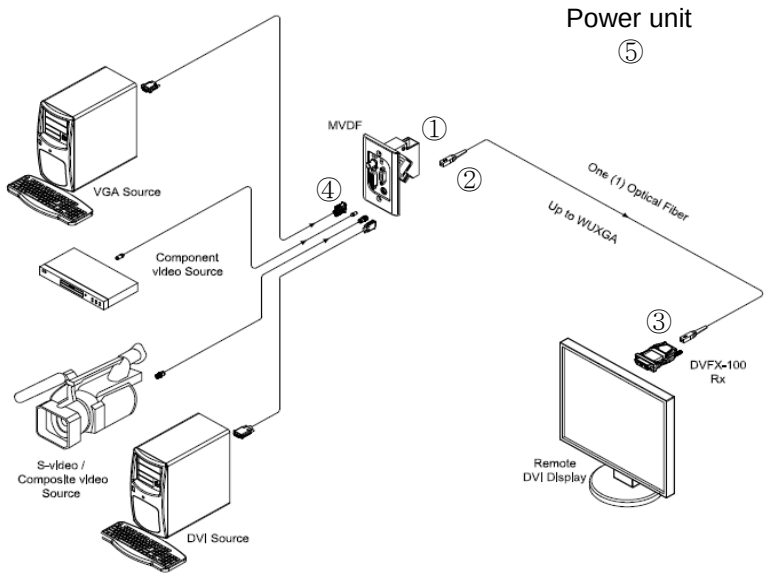
5. Optical video output port
- Transmits optical DVI signal. Please remove dust cover to connect to multi-mode SC terminated fiber.

6. Power connector cover
- Cover of power connector. It should be removed when user connect power supplying cable.

1-7 Device Features

Basic Connection Setup

Please follow the step as below



① Connect Power cables into 3-pin power connector of MVDF.

② Connect SC connector of optical cable to the optical video output port of MVDF.

③ Connect the opposite side of SC connector into SC port of One Fiber DVI Receiver, DVFX-100-RX. For power, connect supplied 5V Power supply to DC jack of One Fiber DVI Receiver. After that attach it to the DVI display directly.

④ Connect the output of source equipment to MVDF using source cable. If the output signal of source equipment is active, Status LED on MVDF will turn ON (Yellow).

The MVDF provides auto source detection (First in, first out) and video output priority when 4 video input signals are connected at the same time. It gives priority at DVI, VGA, S-Video and Composite video

⑤ Above all procedures are connected, turn ON power unit. Ensure the Power LED on MVDF will turn ON (Green)

1-8 Basic Connection Setup

Technical Specifications

Item	Details	Remark
Input	・DVI, VGA, Composite and S-Video	Front panel
Output	・1 x SC multi-mode fiber ・ SC terminated 1 core multi-mode fiber (50um)	Back panel
Supporting resolution	・ Up to WUXGA (1920x1200) at 60Hz for DVI and VGA input ・ Fixed resolution of SXGA (12080x1024) at 60Hz for S-Video and Composite video input	
EDID	・Self-EDID for DVI and VGA	
Max. distance	・ 500m (1,640feet) @WUXGA, 60Hz	
Power supplying	・8~15V	-
Power consumption	・ < 0.5W	
Auto signal detection	・ The MVDF provides auto source detection (First in, first out) and video output priority when 4 video input signals are connected at the same time. It gives priority at DVI, VGA, S-Video and Composite video.	
LED indicator	・ Power (Green), Video input status (Yellow)	Front panel
Dimension	・US standard 1 gang size, PCB: 68 x 85mm	-
Operating temperature	・ 0 ~ 50℃	

Warranty Information

1 (One) Year Warranty

Opticis warrants this **MVDF** to be free from defects in workmanship and mater ials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, d eliver to customer an equivalent product or part to replace the defective item or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the reminder of the initial warranty period, whichever is longer.

Opticis shall not be responsible for any software, firmware, information, or me mory data of customer contained in, stored on, or integrated with any product s returned to Opticis for repair under warranty or not.

Warranty Limitation and Exclusion

Opticis shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis or its authorized agents, causes other than from ordinary use or failure to properly use the product in the application for which said product is intended.

Dispose of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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